333
1933

july—august, 1969

LOUISIANA conservationist

Clark M. Hoffpauer, Director

I have laid aside business, and
gone a-fishing.
—Izaak Walton

comments

To the average person mention of a fishing rodeo brings to mind highly competive fishing for trophies or merchandise prizes, days afloat in the sun, and jostling around the contest weighmaster as contestants jockey for position on the official scoreboard. There's excitement, pleasure and, for a certain few lucky fishermen, moments of glory.

The number of fishing rodeos is increasing each year. At one time there were about a half-dozen. Today there are at least 200 —large and small, fresh water and salt water contests. Some combine both fresh water and salt water species among eligible fish. They are sponsored in many cases by long-established organizations. The Grand Isle Tarpon Rodeo Association is the oldest on the northern Gulf of Mexico and possibly the oldest competitive fishing contest in the country. It is now in its fifth decade of annual summer competitive angling.

In other cases, fishing rodeos are sponsored by civic and social groups that range the gamut from Jaycees to Knights of Columbus Councils, as well as businessmen's organizations and large industrial groups. With few exceptions the sponsoring organizations use profits from the fishing rodeos to sponsor community projects, Boy Scout and Girl Scout activities, other youth programs, and charitable functions. They accomplish much along that line. There is hardly a parish in Louisiana that does not have a rodeo of some sort during the spring or summer. Every large community or city has a sportsman's league or club that sponsors a rodeo.

At a statewide level, particularly when it comes to salt water angling, thousands of fishermen participate in the "rodeo giants." These are headquartered in the southern parishes of the state and attract salt water fishermen from all parts of Louisiana and some neighboring states. Eligible fish in many of the coastal rodeos range from big blue marlin, white marlin, sailfish, tarpon, bull dolphin and tackle-breaking wahoo to speckled trout, sheepshead and red snapper.

Several of the big fishing rodeos list as many as 24 eligible fish categories, with first, second and third place trophies for the top three fish in each category. I mention this in passing only to indicate how diversified the fishing is. To emphasize just how good fishing in Louisiana really is, it is true that some species highly-prized in Eastern markets, such as blue fish, are considered "trash fish" by Louisiana anglers.

Taking an in depth view of the summer months and the wide range of rodeos, both large and small, it becomes evident that there are many economic values that accrue from these competitive fishing contests. In the general excitement of participation, few people realize that the economic side of recreational fishing is tremendous. It is true that this sort of fishing benefits many types of businesses. Rodeo dollars represent an important segment of the overall economy of the state.

Boats, fuel, equipment and many accessories account for a great part of the economic value of fishing rodeos. At any of the larger rodeos, or big game fishing tournaments, there will be gathered a flotilla of yachts and fishing boats with a collective value of many millions of dollars. The boats and fuel represent only the start of an economic chain that has many links.

Next comes tackle and other types of fishing gear necessary for competitive fishing. This is backed up with provisions of all sorts, along with ice, beverages and other items. Rodeo dollars really start to flow, and freely. Expenditures are funneled into all forms of private enterprise—from grocery stores and supermarkets to gasoline stations, motels, restaurants and several score of other businesses ranging from engine repair and boat yards to sales of electronic equipment for boats.

Rodeo fishing is top sport in Louisiana. It is also big business.

LOUISIANA conservationist

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I give my pledge as an American to save and faithfully to defend from waste the natural resources of my country—its soil and minerals, its forests, waters and wildlife.

IN THIS ISSUE

SEPTEMBER BLUE WINGS 4
POLLUTION PROBLEMS IN LOUISIANA 8
FLOWER GARDENS IN THE GULF 12
ALLIGATOR-DISTINCTION OR EXTINCTION 16
SHRIMP 20
FLOWERING DEATH ON OUR WATERS 24
CHANDELEUR QUEST 27
BIRD OF THE MONTH 30

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BLUE SEPTEMBER WINGS

by McFadden Duffy

They came in the summer of 1968, just as they had come for generations untold. Over the gold and green marshlands of Louisiana their flights twisted, swerved, and skimmed across the wind-bent grasses with the precision of the jet-powered Blue Angels. In tight formation blue-winged teal swept low over the open lagoons and marsh ponds. Not a legal shot was fired at them.

The hand of summer was still heavy over the deep South when the early migrants arrived from their breeding grounds in the northern tier of states and the Canadian provinces. They numbered in the tens of thousands, migrating populations building up into the hundreds of thousands. But in 1968 there was no September teal season for Louisiana waterfowlers.

The all-powerful decree from Washington's Bureau of Sport Fisheries and Wildlife, U. S. Department of Interior, had closed the period of "experimental" teal seasons. The reasons were vague, inaccurate, and challenged by the sportsmen of Louisiana and their Louisiana Wild Life and Fisheries Commission.

Last-ditch attempts to convince the Bureau of Sport Fisheries and Wildlife that there should be a teal season were to no avail. The bureau stood its ground, issuing conflicting statements that did not stand up under the probing scrutiny of nationally-recognized waterfowl biologists.

It was a far cry from the elation of early summer, 1965. It was then that the spirits of Louisiana waterfowlers were high. After many long years of effort by the Louisiana Wild Life and Fisheries Commission, the Louisiana Wildlife Federation and its associated sportsmen's clubs and leagues; it had been announced there would be three "experimental" September teal seasons.

Waterfowlers called it a major break-through in waterfowl management. Hunters happily went about the task of securing special teal hunting permits and "duck" stamps in preparation for the special teal season that had been sought for so many years and seemed a remote, elusive and fond wish, but never a reality.

September 18 of 1965 was the target date for a new venture into sound utilization of a waterfowl resource that had remained untapped in this country for many years following adoption of the Migratory Bird Treaty Act between the United States and Great Britain (for Canada).

The season, as established in 1965 and carried out for three years, called for nine days of teal shooting in September, starting September 18 and lasting through September 26. This brief season encompassed two weekends. No other species of waterfowl could be taken during the period.

Research over a period of years by the Commission had pinpointed the fact that many of these game little speedsters, particularly the blue wings, pass through the Mississippi Flyway prior to the opening of any duck hunting season in the United States, even the Northern states. Aerial waterfowl censuses carried out by the Commission since 1950 revealed that blue-winged teal consistently arrive in Louisiana on or about August 15.

After the first arrivals, blue-winged teal numbers continue to increase through September, with many thouands moving through to Central and South America while additional fllights are arriving from the north. Although it has been impossible to determine the exact number of blue-winged teal that move through Louisiana during the migration period, it is believed that the total exceeds two million. There have been times when as many as 600,000 have been found in Louisiana during a single inventory.

This early movement of teal through the Mississippi Flyway was established in a cooperative inventory study conducted by all of the 14 states in the Mississippi Flyway between 1954 and 1957. The study, first of its kind, showed that large numbers of blue-winged teal migrate through the Mississippi Flyway during late August, September, and October, but that only a very few remain in the flyway during the winter months, these being found in the coastal marshes of Louisiana.

The study also revealed that only the trailing edge of the blue-winged teal flight was available for shooting in the northern states that opened their duck season prior to October 15, before all of the blue wings left that area.

It is evident that since the advance flight of blue wings moves through the Mississippi Flyway states prior to the opening of any regular duck hunting season the only opportunity for utilizing this unharvested segment of the waterfowl population is through permanent establishment of special hunting seasons in September.

The first such season was formally requested by the Louisiana Wild Life and Fisheries Commission in a resolution adopted by the Mississippi Flyway Council. This request was made after the council's three-year study revealed the fact that the large, advance segment of the blue-winged teal flight was not being shot in the United States. The opportunity existed for utilizing these ducks only by setting a special hunting season in September.

To be specific, as far as blue wings were concerned; it had to be September shooting or the great majority of these fine little ducks would be south of the border in sombrero land. With no treaty agreements with Central and South American countries and only a paper-value treaty with Mexico, shooting pressure on the blue wings was confined to areas out of the United States.

It might be well to mention that in 1968, when the teal season was arbitrarily cancelled in the United States, Mexico had a four-month duck season with a daily bag limit of 15 on week days, and 20 on Saturdays and Sundays. Louisiana waterfowlers looked upon the situation with disdain and rightfully considered it a feathered foreign aid program, with North American duck dollars going into Latin American loosely-regulated utilization of the teal and other duck populations.

During the time that elapsed between the flyway study and the spring of 1965, various proposals for handling the teal season were debated by the Mississippi Flyway Council and the U. S. Bureau of Sport Fisheries and Wildlife. Finally, in 1965, after careful planning, the Bureau of Sport Fisheries and Wildlife authorized each state in the Mississippi and Central flyways to hold a nine-day teal season on a strictly experimental basis, if it so desired.

In accepting the season, each state agreed to a number of terms and conditions outlined by the Bureau for evaluating the results of the hunting season for teal. The states cooperated in gathering data on the number of hunters, the number of ducks bagged, where they were bagged, etc. through a system of permits, questionnaires, and bird banding stations. Certainly this represented sound planning on the Bureau's part, and information gathered would serve to determine if the September teal seasons would become a permanent part of the traditional sport of waterfowling.

It was known that there is a substantial loss of blue-winged teal each year due to natural mortality; and it was believed that taking of these ducks by hunters immediately after the fall flight materialized would in a large part replace the natural mortality, and not add to the losses occurring annually on the wintering grounds in Central and South America.

From the outset, it was agreed that if the shooting of teal in the special September did not reduce or adversely affect the fall flight the following year, the logical success of teal seasons would be assured from a biological standpoint.

Taken into consideration, and of great importance, was the possibility of other species of ducks being shot during the special teal season. It was known that wood ducks, some pintails, mottled ducks, shovellers, a few widgeons and gadwalls would be present. Louisiana hunters would be forced to become more familiar with duck identification. They did their homework well!

Another prime biological consideration was the effect that the special hunting season would have on hunter interest and resulting retention of marshes and other wetlands essential to the future preservation and maintenance of waterfowl populations on the continent. There is scarcely an acre of marshland in Louisiana today that could not become subject to conversion from wildlife habitat to some other type of land use. Rapid industrialization is causing heavy annual losses in waterfowl habitat each year, and many irreplaceable marshes are being retained by waterfowl hunters in exchange for the duck hunting opportunity that they provide each fall and winter.

A highly comprehensive report entitled "1965 Experimental September Hunting Season on Teal" was published by the U. S. Fish and Wildlife Service, Bureau of Sport Fisheries and Wildlife, outlining the results of the first season. Of interest to Louisiana hunters was the fact that 20 states in the Central and Mississippi Flyways participated in the first special season on teal in 1965. Approximately 202,000 permits were issued in those states to prospective teal hunters. It is estimated that 55 percent of this total actively exercised the permit and went afield.

The Bureau indicated that approximately 484,000 blue-winged teal and 47,000 green wings were killed during the first teal season. This included cripling losses that averaged about 20 percent of this total.

In Louisiana a total of 41,415 permits were issued to teal hunters. This was nearly half of the total number of Louisiana waterfowl hunters who shot ducks during the regular season that year.

Hopes of many teal hunters during the first season were shattered when Hurricane Betsy slammed into Louisiana on September 9, immediately

prior to the September 18 opening of the first teal season. This destroyed homes, automobiles, hunting camps, rolled carpets of matted grass into ponds and materially reduced the number of potential teal hunters to about 35 percent of the permit holders.

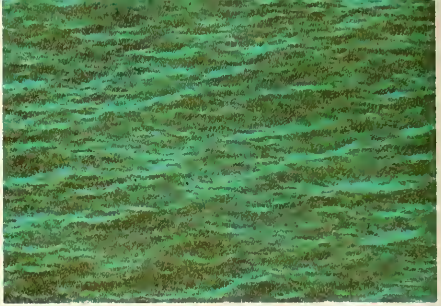
The hurricane also reduced the number of available blue wings. With inherent intuition, most of them moved on before the storm reached land. Despite this blow, the first teal season provided good shooting for those who did have an opportunity to get out. There was fine shooting on Catahoula Lake, and throughout southwest Louisiana during the season.

The Bureau report showed that Louisiana duck hunters bagged 63,770 blue-winged teal and 2,520 green-winged teal. This does not include cripping losses, pegged at about 20 percent. About one-third of the hunts made in the state yielded limit bags, with the average kill per hunter per day averaging two teal.

In the 20 states, 87 percent of the teal season permit holders indicated they favored another special season. This resulted in the second teal season in 1966. It began at sunrise September 17 and closed at sunset on September 25. Regulations were identical as in the first teal season. Approximately 33,000 permits were issued in 1966 and Louisiana's duck hunters bagged about 96,000 teal. The increase in the bag in spite of the decrease in permit holders can be attributed to the hard-core duck hunters making the most of a season unmarred by hurricane damage to marshes and property that characterized the first teal season.

Seasons were set to evaluate the different opening dates as related to number and kinds of ducks of Louisiana. Betsy changed our plans be-

Continued on page 11



. . . man's inventiveness
is largely responsible
for the pollution of
his environment

WATER POLLUTION in LOUISIANA

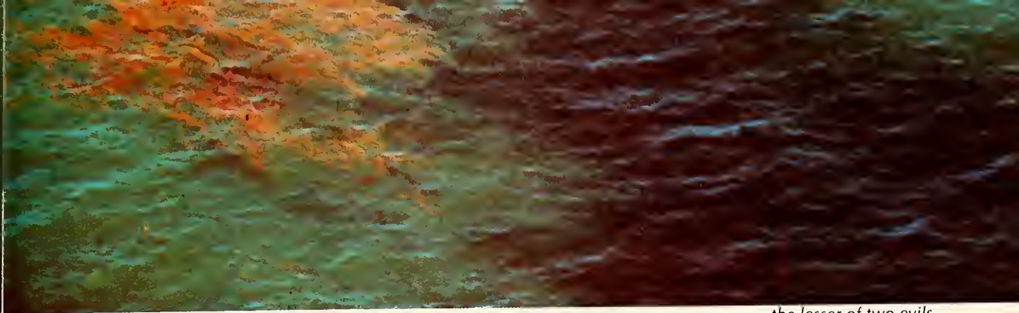
by Robert A. Lafleur and T. J. Gilbert

Water quality degradation in Louisiana probably began with the advent of the first white settlements. Since that time ever-increasing amounts and types of man-made waste have been introduced to our water

It was not until 1940 that the Louisiana Stream Control Commission was created by an Act of the Legislature. Its responsibility is to regulate the discharge of waste waters and to abate water pollution. Since that time pollution problems in Louisiana have been found to be numerous and varied in nature—from serious water quality degradation to conditions that have been considered minor.

Industrial expansion beginning about the middle of 1950, accompanied by population increases, has proceeded at an accelerated rate. In 1956 industrial expansion was recorded at an average of one and one quarter million dollars daily; from 1964 to the present time this growth has amounted to approximately three billion dollars; wastes from virtually every conceivable type of manufacturing process are discharged to our streams in almost alarming amounts. Therefore, the Louisiana Stream Control Commission has been confronted with an ever-increasing number of complex decisions relative to proper handling of industrial wastes to prevent and/or abate pollution of our state's waters.

Louisiana's Water Pollution Control Authority complied with the Federal Water Quality Act of 1965 by submitting water quality standards for all interstate waters, portions thereof, and coastal areas, along with a plan for implementation and enforcement. These standards were approved with few exceptions, February 1968, by the United States Department of the Interior, Federal Water Pollution Control Administration.



. . . the lesser of two evils . . .

. . . uncertain waterborne destiny . . .

. . . water pollution through leakage . . .

. . . A tree dies marked but not remembered . . .

. . . where something once grew . . .

. . . it once called a continent home

The plan for implementation and enforcement prescribes that all domestic wastes shall receive a specified degree of treatment not later than 1972. Industrial waste is to receive the best practicable treatment, secondary or its equivalent, by December 1972. In addition, the Commission will review all permits for industrial waste discharge during the current calendar year to determine: (1) level of treatment now being provided; and (2) whether or not further treatment will be required to comply with the provisions of the plan.

It must be recognized that man's inventiveness is largely responsible for the pollution of his environment; that industrial production technology has far out-distanced the technology of waste treatment; also that increased agricultural yields often result in critical levels of pesticides being introduced to our waterways. Man's inventiveness being the cause of his polluted environment—this inventiveness must also find the cure. It is felt that implementation and enforcement of Louisiana's water quality standards will add impetus toward this end.

A brief resume of the present conditions of Louisiana's major river basins and coastal waters is as follows:

Pearl River on our eastern border receives the partially treated waste—better treatment facilities are now in the planning stage—from one of our largest paper mills. Water quality has been upgraded and can be expected to improve even more, especially when proposed domestic waste treatment become a reality.

Bogue Chitto, Tangipahoa, Amite and **Tchefuncte** rivers have good water quality, although several of these streams are intermittently disturbed by gravel mining operations. Surveillance and efforts to control this problem are daily assignments.

The **Mississippi River** accommodates approximately 75 per cent of the heavy industry in the entire state; at the same time, half of the state's population relies on this river for a potable supply. Water quality, in spite of the vast amount of domestic and industrial waste discharged to it, is good except during periods of low flow. Taste and odor problems are currently under intensive study by the Federal Water Pollution Control Administration and the Stream Control Commission.

The **Atchafalaya River** is probably the last virgin stream in the sense of water quality, in Louisiana. Except for oil field salt water discharges that are being noticeably reduced, it receives no waste discharges until it reaches the upper Gulf area near Morgan City.

Bayou Teche and the **Vermilion River,** former distributaries of the Atchafalaya River, have relative small flows. Consequently, water quality is very poor most of the year and conditions in Bayou Teche are further aggravated during the sugar cane grinding season each year. A flow augmentation plan to divert Atchafalaya River water to these two streams is pending.

The Mermentau River is almost without pollution. Agricultural irrigation is the major water use in this basin.

The **Calcasieu River** has good water quality except in the area of the Lake Charles industrial complex. Studies to determine appropriate measures for improvement have begun.

The **Sabine River** on our western border is in good condition —Toledo Bend Reservoir is providing recreational opportunities that were previously nonexistent in this part of the state. There is concern relative to water quality when three paper mills located on the stream go into full operation.

Cross Lake and **Caddo Lake** in Northwest Louisiana, until recently, were seriously polluted by oil field brines. The quality of these waters is now being upgraded.

Red River's water quality is degraded by surface drainage from natural salt flats between Texas and Oklahoma. Louisiana's portion of the river is beginning to be industrialized and there are also navigational structures being proposed. Therefore, we can expect definite changes in the physical and chemical characteristics in this stream.

Water quality of the **Ouachita River** has greatly improved during the past decade by reason of oil field brine discharge reduction and additional treatment of municipal and industrial waste discharges.

Little River in Grant, Winn and LaSalle parishes was once seriously polluted by oil field salt water. However, water quality is much better due to joint efforts by the oil producers and the state regulatory agencies the last five years. Continued upgrading of these waters is expected.

Pollution of Louisiana's Coastal Waters results largely from oil field operations. Oil spills, varying in size, are an ever-present problem. Pollution control and pollution abatement in our coastal waters are commanding more and more attention because these areas contain some of our most abundant natural resources as well as economically valuable industries. Recent federal and state regulations regarding the drilling and production of oil in these waters should alleviate some of the present problems.

Although pollution control is the responsibility of our regulatory agencies it cannot be achieved without the aid of all segments of our population. Therefore, we sincerely hope we will continue to receive your active support and assistance.☐

Continued from page 7

cause the first season was not a true indication of what could be had in the form of teal hunting.

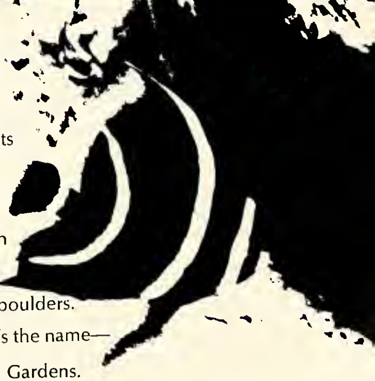
In 1967 the special teal season, generally accepted as a permanent special season on the early migrating

Continued on page 23

FLOWER GARDENS in the GULF

by Lyn Johnson

Some underwater enthusiasts say it looks like a blue heaven, tinged in shades of green. Others describe it as a flooded western movie set where cowboys and Indians could pop out at any minute from behind huge boulders. Still another image gave the coral reefs the name—Flower Gardens.



What, you ask, is so unusual about a coral reef?

Nothing at all if you're thinking of the tropical reefs off sunny Caribbean shores.

But the Flower Gardens are unique, and their location makes them unusual. The twin coral reef peaks, about 10 miles apart, are situated 125 miles south of Louisiana Point at Sabine Pass in the Gulf of Mexico.

The Flower Gardens are the only living coral reefs found this far north, about 500 miles farther north than any other similar reefs. The nearest living reefs are off the end of the Florida Keys and south of Tampico, Mexico.

Dr. T. E. Pulley, director of the Museum of Natural Science in Houston, has explored the reefs on U. S. Navy and museum geological diving expeditions nearly every year since 1960.

The museum director said the Flower Gardens are at the "thin edge" of having acceptable growing conditions, but they are the only all-coral West Indian reefs living in this area of the Gulf. Although growth rates are minimal, limited by occasional winter temperatures (under 70 degrees), Dr. Pulley said that there are more species of coral on the reefs than living in the Florida Keys.

The reefs and the foundation, where the water drops to 300 to 600 feet, were formed several million years ago with advances and retreats of glaciers and the rise of salt domes. If sea level remains at its present high standard, the reefs may reach the surface in a thousand years or so.

Fishermen after snapper and grouper have used the reef for years. A good fish population clusters around the reef peaks which are within 60 feet below the surface on the East and West Flower Garden Banks.

Scuba diving for spear fishing and for the beauty of the reefs is more uncommon because of the long distance from shore and the treacherous westerly currents.

Anchor over one of the Flower Garden banks and you can peer over the side of the boat to see acres of coral that look like massive clumps of rounded rocks.

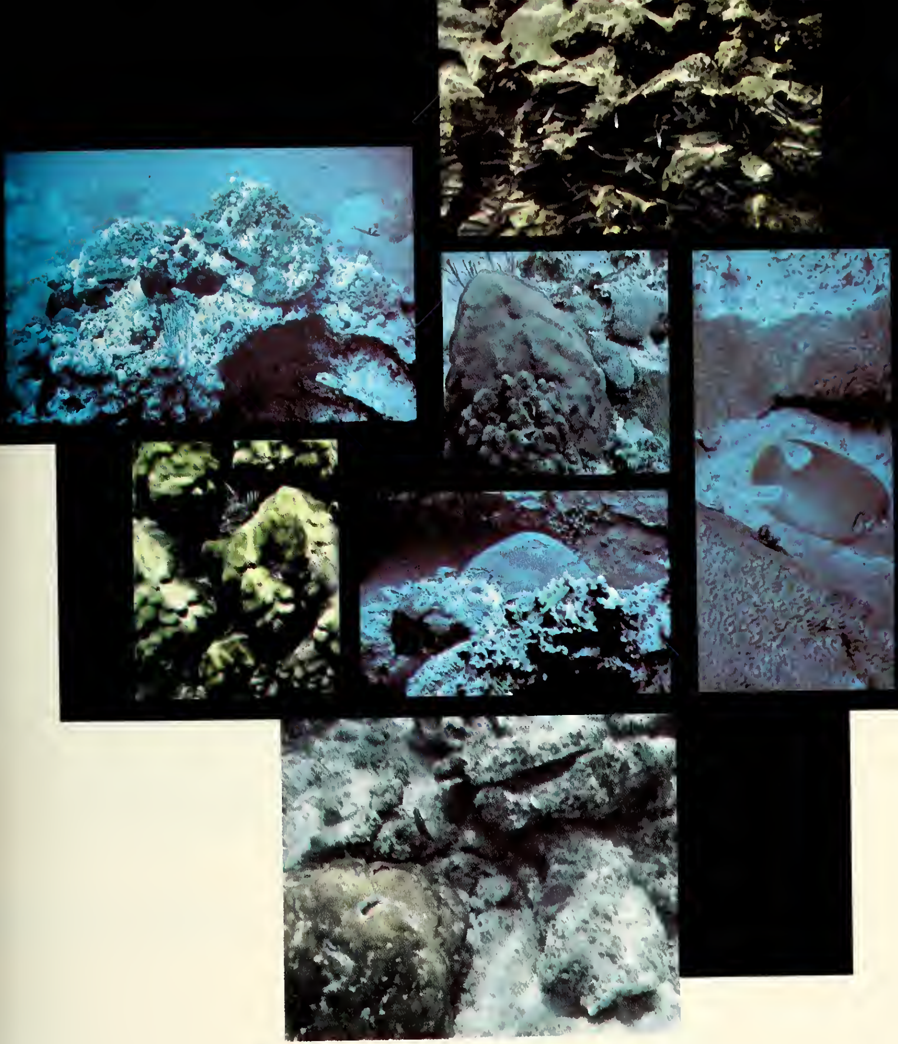
With scuba tanks on, the next stop is the reef and its inhabitants.

Splashing into the clear water, the first thing you notice is the water's coolness, about 75 degrees. Plunging down the shot line, the strong Gulf current pushes against you trying to divert your course.

It's as if you're walking through a strange forest and important to make a mental layout of the landscape to find your way back to the boat. At this point, and later on, a wrist compass will be your best friend.

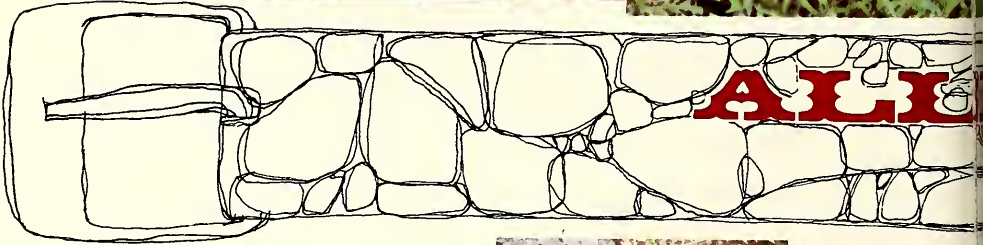
With help from a weighted belt, you get down to the floor of the reef's apex. A parrot fish peers through the face mask, and, unafraid, rolls his eyes at you. A platoon of sergeant majors march by, close on the fins of a school of queen angel fish.

The reef is beautiful, like a lost paradise buried by time and the sea. The coral formation resemble small mountains of brain matter and spongy rocks that you and the fish can wander between.



One of the divers speared a snapper, another killed a moray eel. Others loosened chunks of coral for geological examination and colorful souvenirs. Back up on deck, the reds and yellows of the coral shine vividly in the sunshine, no longer subdued by the depth of blue water.

The beauty of the reef may not compare to the coral found in the island shallows of the Bahamas, and the spear fishing may not match that around the oil rigs. But the Flower Gardens in the Gulf offer a unique historical lesson and great adventure for the diver, not too far from Louisiana shores.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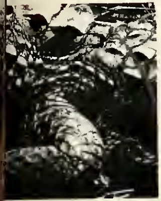
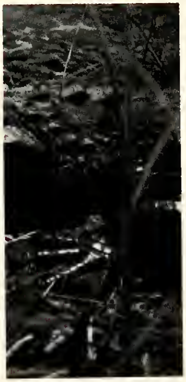




It's nearly midnight, a dark night with only a shadow of a moon. The drone of a small outboard motor alerts the bullfrogs to sound a warning.

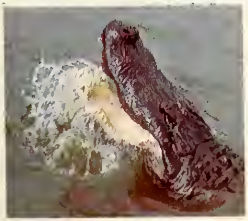
A headlight scans the marsh bank. The light stops, focusing on a red-hot disc shining above the water like a burning ember.

The motor is silenced. The bateau glides closer to the red glow without a sound. A long pole slowly eases out, the wire noose on the end slides through the water. Carefully, the noose slips over the head and is pulled tight.

An alligator is captured but he doesn't like it. Violently spraying water, the alligator twirls and lashes about in the marsh, trying to slip out of the wire. But the noose holds its prisoner fast.

GATOR *distinction* or XTINCTION

by Lyn Johnson



"He's a big one. Move the boat over to the bank."

One man in the skiff holds the 'gator tight on the line as the other man jumps onto the marsh bank to grab the snout and slip a band over it.

Risky business. One swift clamp of the powerful jaws and a hand could be mangled.

But the man knows his business. Working as a wildlife biologist, he used to capture alligators at the rate of about 50 a night at Rockefeller Wildlife Refuge. Today, he is director of the Louisiana Wild Life and Fisheries Commission.

As he ties the 'gator's legs back and slips him into a heavy burlap sack, Clark M. Hoffpauer recalls how the thrills of capturing alligators for research became a nightly routine, motoring a squirming boatload to pens for tagging.

Hoffpauer's partner in the boat on this misty night would rather be out in the sunshine playing golf. Although he's an avid fisherman, alligator hunting is not the game for Julius Boros, one of the nation's top golfers.

It's a perfect scene for a television show, one of a 13-part network series. Called "Off-Tour With Julius Boros," the show takes the golfer and a New York City camera crew to different corners of the country and the world. Directed by Robert Halmi of New York, the Louisiana segment will be aired in January.

With no need for a script, the sequence rolled beautifully. Only the mosquitoes refused to cooperate. On the television screen, Director Hoffpauer and biologist study leader Ted Joanen are shown teaching Boros how to capture an alligator, the purpose of alligator research and the importance of keeping the species alive.

What the television audience won't see is the action behind the 16 mm. cameras.

Bundled up in windbreakers against the chilly spring night and bathed in mosquito repellent, the stars of the show, the camera crew (including this reporter) and the boat drivers started off into the misty marshes. Familiar with every turn in the Rockefeller Refuge marsh, Joanen led the boats straight to a 'gator's den.

When the red eyes reflected in the headlight, the two camera boats moved into position close to Hoffpauer and Boros to capture the action on film. Stunned by the bright television lights, the 'gator tried to make a quick exit but Hoffpauer was too fast. The noose slipped around the alligator and a wet fury was trapped.

The alligators are captured as part of the research and restocking program at Rockefeller where the vital statistics are recorded in a permanent log. This alligator was a seven foot, 95-pound female, about nine years old and fat with eggs, some 15 to 60 with which she will fill her nest.

In her meanderings around her marsh home, the alligator had lost a metal tag biologists attached several years ago. However, in addition to a clipped toe marking, her finlike raised dorsal scales on the tail were notched in one of 10,000 code combinations to identify and keep track of the movement and history of each alligator.

With a strong rubber band around her mouth, the alligator quietly took a nap on the table while Joanen and Hoffpauer exploded some of the alligator myths and explained the commission's program at Rockefeller.

"The native Louisiana alligator that roamed this area for centuries was almost lost to the state and the country for two main reasons," Hoffpauer said.

"First, the drainage of wetlands not only deprived the 'gator of his home but diminished his food supply at a tremendous rate."

Inroads of civilization into the marshes made easy access to skin hunters. The mineral and industrial boom transected Louisiana coastal marshes into one-quarter mile sections. Man-made canals depleted the alligators habitat and an influx of people in marsh buggies nearly annihilated the species.

"Second, and most important, profits from the skins enticed hunters to kill all the 'gators they could get their hands on."

The high-priced demands of the fashion world for alligator skins began around 1855 when Paris designers started the hide trend. Later in Civil War years the shortage of leather brought more calls for the durable skins. Since the turn of the century demands have reached a higher pitch and the 'gator population was slashed more sharply. Early records show that more than three million alligator hides were sold out of Louisiana from 1880 to 1933. According to severance taxes on hides from 1939 to 1955 about 314,500 skins were harvested which means about 19,500 a year.

The millions of alligators that roamed the watery Louisiana lands were gone. They had survived for centuries but only a few thousand could withstand man and his civilization.

In 1958 the commission launched an intensive alligator research program at Rockefeller to protect, study and restock one of the state's oldest and most valuable resources, Joanen said.

"We're not trying to keep the species in zoo-like surroundings just here," Hoffpauer emphasized. "Remember what happened to the passenger pigeon in a zoo? But with this wildlife management program we hope to allow alligator hunting seasons so that more people will benefit from the fine skins of Louisiana 'gators."

With protection, research and sanctuary programs, the alligator population has slowly increased to a conservative estimate of about 50,000 to 100,000 in the state's wetlands.

Even with management programs and regulations governing alligator breeding and farming operations, the slaughter continues.

Man is still the alligator's worst enemy. Enforcement, education and stricter legislation are the only keys to stop the greedy murder.

The killer today is the poacher, but there's another man helping the outlaw pull the trigger—the hide buyer. Prime targets for the outlaws are the southwest coastal areas where most of Louisiana's alligators thrive. From there the poachers find a ready market for the illegal skins not only in Louisiana but across the state line in Texas.

Proposed federal legislation to protect endangered species such as the alligator would cut the market out from under the outlaws. Similar bills in the House and Senate seek to help reduce pressure on endangered species around the world by authorizing the Secretary of the Interior to prohibit their importation; to curb illegal interstate and foreign commerce in endangered native wildlife; and to permit the Secretary to acquire private holdings inside any Interior Department area to protect endangered species.

Hopefully, the legislation will be enacted as soon as possible to hamper the buyers of illegal skins and put the poachers into the hands

Continued on page 23

Shoes, belts, purses, wallets—the alligator's fashionable, high priced distinction. Unless he is allowed to populate, the alligator's distinction will quickly be extinct. Valued at nearly $1,000, the group of alligator products are courtesy of Kreeger's, Rubenstein Brothers and Wehmeier's Belt Shop, all of New Orleans.

S

Ever see shrimp leap out of water? They're jumping at the Louisiana Wild Life and Fisheries Commission's Marine Laboratory at Grand Terre.

For the past seven years, biologists have been studying methods and techniques of raising shrimp in ponds and to research the commercial feasibility of pond culture.

The project utilizes 16 newly-built one-quarter acre ponds which slope from about two and half feet at the shallow end down to three feet at the deep end. At the pond's deep end is a catch basin, six by 12 feet and 18 inches deep with slots for screens located near the standpipe drain.

Each pond is filled with roughly 200,000 gallons of brackish water from a nearby harbor which connects with Barataria Bay. A 50-mesh saran screen filters the water to keep out stray fish and sea creatures which float through the deep well pump.

Shrimp are stocked in the ponds twice a year—the spring with brown shrimp and the summer with white shrimp. This year about 15,000 juvenile shrimp are stocked per acre, for a count of about 3,750 shrimp in each pond.

The tiny shrimp are fed about five percent of their body weight daily, measured from a sample taken each week. Three types of feed are used, Purina catfish chow, corn meal and ground fish.

HRIMP!

After 80 days of eating and living in water temperatures varying between 46 and 98 degrees Fahrenheit, the shrimp are harvested. The six-inch drainpipe is lowered, covered with a hardware cloth cylinder to keep the shrimp from escaping during the six hour draining process.

As the water level lowers, the shrimp swim with the water to the catch basin. They become crowded and small dip nets thrust into the water agitate the shrimp so that they leap out of the water, creating a lively, colorful water show.

After two to three man hours of harvesting the shrimp from the catch basins, the results are large, fat shrimp which measure about six and three-quarters inches at the top 23 count catch. The total weight during the best harvest was 800 pounds per acre.

Results of the studies show that shrimp do grow fatter in ponds. To be commercially feasible, results should net about 1,000 pounds an acre if there is an adequate source for stocking.

The project has indicated that commercial pond culture of shrimp could be feasible if worked on a larger scale, using about five-acre sized ponds. However, the major problem of finding a source for stocking millions of tiny shrimp to raise would have to be eliminated. ☐

Continued from page 11

ducks, began September 22 and extended through September 30. It proved highly gratifying to Louisiana hunters and there was evidence that the teal seasons had bolstered the spirits of duck hunters forced to comply with more restrictive regular seasons. It was obvious that habitat was being improved at a private level because of the additional hunting opportunity.

General feeling was that the teal season had proved itself. No obvious harm had been done to blue-winged teal populations during the three test years. Hunters placed more stock in species management and the extra recreational opportunity provided by the teal seasons soothed relationships with the U. S. Bureau of Sport Fisheries and Wildlife that had been strained over a period of years.

The widespread sentiment that the teal season had proved both satisfactory to Louisiana hunters, as well as to waterfowlers in other states, was shattered March 10, 1968. Speaking at the meeting of the National Waterfowl Council in Houston, held in conjunction with the 33rd North American Wildlife Conference, Walter Crissey, U. S. Bureau of Sport Fisheries and Wildlife, crisply announced that he would recommend that no September teal season be held.

Response by the Commission followed immediately with action. On March 26, at its regular monthly public meeting, the Commission adopted a strong resolution of protest. This was followed a few weeks later by a visit to Washington of the entire Commission, Director Leslie L. Glasgow, and Assistant Director Richard K. Yancey.

Strong support was offered by members of Louisiana's Congressional delegation including Congressmen Hebert, Edwards, Boggs, Rarick and Caffery, as well as representatives of other Louisiana Congressional offices when the Commission delegation conferred with John Gottschalk, director of the Bureau of Sport Fisheries and Wildlife, and his staff. The Louisiana group contended that there was no valid reason why the early teal season should not be continued.

Officials of the bureau stated that the door had not been closed as far as a season on teal in 1968 was concerned and promised an announcement pertaining to teal by June. But the door was closed! An interim news release from Washington quoted the bureau as opposing the season on the grounds that the kill of green wings had been excessive, and that violations had been widespread. Both statements were repudiated by figures obtained from the bureau's own files. The population figure showed the green wings up six percent over 1967 and 21 percent above the 1956-62 average. The so-called excessive violation figure of 47 percent was a projection from only 15 out of 72 violation cases made in Louisiana during 69,000 hunting efforts during which about 200,000 teal were baged.

The finality of the situation came in the form of a terse announcement that dismissed logic and further debate. It was "too late" to establish the mechanics of a teal season. That meant permits, questionnaires and, "administrative" procedures.

But the door that was slammed in 1968 swung slightly ajar during the March annual convention of the Louisiana Wildlife Federation held in Baton Rouge. John S. Gottschalk, director of the U. S. Bureau of Sport Fisheries and Wildlife, was one of the principal speakers. During a question and answer period following his talk, one question directed toward his was: "Will there be a teal season in 1969?"

Gottschalk replied that the door was far from closed.

On May 24, Leslie L. Glasgow was honored by the Louisiana Outdoor Writers Association and many of his friends at a testimonial dinner in Baton Rouge. At a news conference that morning he was asked about a teal season in 1969.

"The teal season was a wonderful opportunity for Louisiana hunters and I am all for having one this year, providing it doesn't hurt the population," was his reply.

Teal will come whipping down the flyway again in late August and September. Prospects are bright! Instead of silent marshes that greeted them last September they will again hear the sporadic boom of shotguns and a relatively small percentage of the continental population will be harvested before they head for the land of sultry days, sombreros, tequila, and heavy hunting pressure. The 1969 teal season will be from September 13 through 21, with a daily bag of four and a possession limit of eight. Without this season there would be a waste of a renewable resource or to put it more bluntly, POOR CONSERVATION. ☐

Continued from page 18

of enforcement agents.

Until then, the alligator kill continues. Wildlife agents are constantly on the lookout for the slippery poachers. In the commission's enforcement district five, which governs most of alligator territory in Southwest Louisiana, Capt. James Ellis has a special force of agents concentrating night and day on 'gator detail.

But the outlaws take the risks. To them the chances are worth it when they can kill 40 alligators a night and sell the hides for the going price of $7 a foot.

Some areas, especially in Cameron Parish, poaching penalties have been strengthened, coupling heavy fines with jail sentences. However, in other areas the fines are generally so low that they are written off as a business loss and the outlaw is back out making a profit the next day. Stiff overall penalties, including the authority to confiscate equipment, are direly needed to bring the poaching business to a halt.

Action to preserve the alligator can be taken only if the people of Louisiana and the nation are jolted to the rude awakening of what is happening and that with their help the alligator can thrive as a valuable renewable resource.

It will take a while to replenish the still sparse supply. Young alligators measure about eight to nine inches at hatching and after a year are about 22 inches long. It takes five to six years for a 'gator to reach sexual maturity of six feet long.

Given a little help and a cool marsh, the alligator can make it on its own. Seasons regulated to time, bag limit and method of catch will be opened so that Louisiana residents can turn over a neat profit to supply the fashion demands for shoes, handbags, belts and cases. And the alligator can live and reproduce to keep his native wetlands stocked for hunters.

Until that time when there are enough Louisiana alligators to go around, the closest most people will get to the excitement of hunting alligators in the marshes will be watching it on television. ☐

FLOWERING DEATH On Our Waters

by McFadden Duffy

Drifting clumps of bright green, floating leaves, dangling roots that draw nourishment from fresh water and bedecked with an orchidlike lavender flower have spread into a green and near-purple blanket of death on many of our Southern lakes and streams today.

To the casual observer, particularly tourists, rafts of flowering water hyacinths present unmatched beauty on a massive scale. For the Louisiana Wild Life and Fisheries Commission and the U. S. Corps of Engineers, this beauty is a sultry surface of spreading death for countless streams and bayous. Rafts of matted hyacinths shift about on the larger lakes, blocking navigation and destroying valuable waterfowl food plants.

Take a good look at any map of the United States. Run an imaginary line from Los Angeles, California, to Savannah, Georgia. Roughly, that's the present hyacinth range but each year finds the plants edging slowly northward.

Louisiana is a leader in the fight to eradicate hyacinths. This pretty relative of the water lily and the water lotus was first introduced into this country in New Orleans in 1884 during the International Cotton Exposition.

The festival attracted the attention of the world and many foreign countries shipped exhibits to New Orleans. One of the most beautiful was that of the Japanese. Visitors to the exhibit were sent away with souvenirs—tiny bulbs of a pretty aquatic plant that somewhat resembled a lily.

Delighted flower fanciers soon learned that they had a botanical tiger by the tail. Within a few years water hyacinths had made their way from water fountains and fish pools to bayous, lakes and drainage ditches.

Water hyacinths are often incorrectly known as water lilies; however, they possess certain qualities and characteristics that place them apart from their less formidable relatives. They are perennial floating plants with the botanical name of *Eichhornia crassipes* and originated in South and Central America.

Because of its beauty when in bloom the hyacinth has been transplanted to India, China, Japan, the Philippines, Java, Australia, South Africa and, unfortunately, the United States.

Nature has endowed the water hyacinth with more tricks than a circus magician. Foremost of these is a reproductive system that staggers the imagination. Hyacinths reproduce both from seed and by root offshoots. If left uncontrolled in still or slow-moving water, hyacinths double in number every two weeks. Provided there is enough space, one plant is capable of producing 65,000 plants in one vegative season which is about eight months in many Southern states.

Floating plants, often as many as 900,000 to an acre of water, form a dense mat over the surface of a lake or stream. The mat becomes a floating berth for other objectionable aquatic plants such as alligator grass. This raft often becomes so compact that it can support a dense growth of cattail or young willow trees.

Pollination of water hyacinths is not only performed by bees and other insects but nature has provided the plants with a means of self-pollination to speed up the process. The number of seeds produced by an acre-wide mat of flowering hyacinths is estimated to be 50 to 800 million of which about five percent mature and germinate.

Seeds remain dormant for a whole season but retain their viability for years. They are frequently carried by birds from one locality to another, a crippling blow in the fight to eradicate them.

This is why it has been possible in the past to clear a body of water of hyacinths either by mechanical means or use of chemicals only to have dormant seeds sprout again in two or three weeks, or two or three years. Even if biologists, or chemical manufacturers, could devise some way of destroying dormant seeds—a feat they have been unable to accomplish thus far—a body of water can easily be infected again by passing birds, or the influx of hyacinths from an adjoining body of water.

Persons interested in conservation are naturally frightened by the serious consequences that can result if control of hyacinths is relaxed. By cutting off light penetrating into the water, a dense growth of hyacinths first breaks the most important chain of production of phytoplankton, primary food for all aquatic life. As planktonic life disappears, so do the plankton-feeding fish.

Certainly valueless as food, hyacinths not only block out light which is necessary for underwater aquatic growth, but also destroy other aquatics upon which ducks feed. A raft of hyacinths shifting about on a lake can ruin a good duck hunting pond or lagoon quickly. This movement of hyacinth rafts also is detrimental to fishing, blocking important fresh water fishing areas.

With hyacinths firmly entrenched in Southern waters and inching northward, a natural question comes up. What is being done to control them?

In the discouraging fight against the plants man has used every weapon from flame throwers to costly chopping and grinding machines. Even baling machines have been used. Spread of hyacinths continues and the problem of controlling them has become a national one.

As early as 1890 agitation was begun in Congress to appropriate money to experiment in hyacinth control. Some forward looking sportsmen were already aware of the growing threat presented by the undesirable aliens; but it took them seven years to weedle $5,000 from Congress. Today, the annual hyacinth fight tab in the Southern states is counted in the millions. Eradication is just a distant hope and "control" is the name of present hyacinth—related activities.

The U. S. Corps of Engineers has been active in the fight ever since the Congressional appropriation in 1897 indicated national recognition of the problems that uncontrolled hyacinth plants presented. The Corps joined forces with other governmental agencies and conservation authorities in a score of states in efforts to check inroads of the botanical invader. All engaged readily admit that they haven't won a major battle yet.

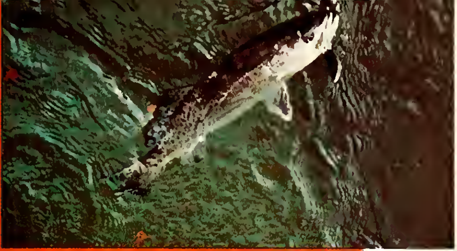
Arsenical poisons were first employed by the engineers. Their use led to damage and controversy. It was abandoned. Then they investigated and developed several machines. One type picked up hyacinths out of the water and placed them ashore. Another, possibly inspired by a New Orleans coffee grinder, chewed up the floating pads and set the pulp afloat. All of the machines were expensive and one, used near New Orleans, cost better than $100,000.

During World War II an important discovery was made. The application of certain chemicals used to stimulate plant growth could, in higher concentrations, be used to destroy plant growth. One of the chemicals, known as 2-4-D, seemed to destroy plant growths such as hyacinths without hurting useful grasses. Furthermore, these 2-4-D chemicals were harmless to men and domesticated animals.

Still gratifying, and of keen interest to sportsmen, 2-4-D proved to be harmless to fish at the rate used to kill hyacinths; making it stack up as a worthy weapon with which to fight hyacinths.

Conservation people in the Southern states hasten to point out that this wonder chemical has not solved the hyacinth problem by any means. Even after a mat of the plants has been destroyed by the chemical spray there is the problem of seed germination. It must be stressed that hyacinth seeds remain dormant for varying periods of time, up to and beyond seven years. Constant vigilance is necessary because a cleared area can be infested again.

Continued on page 29



CHANDELEUR QUEST

by Robert A. Beter

A balmy late spring morning in May, 3:30 a.m. to be exact, and we are on our way to Breton Sound and the Chandeleur Islands. After watching the weather forecaster the night before we knew that a Bermuda high pressure system would prevail during the next couple of days. The tide differential was predicted to be 1.5 ft. with high tide about 11:00 a.m. Light and variable winds were the order of the day.

Our 20 ft. hull was launched and gassed at one of the numerous marinas found between Hopedale and Shell Beach. Speeding out of Bayou Laloutre we hit the New Orleans Gulf Outlet, spoken of generally as the "Seaway," and headed southeast toward Breton Sound. During the 30 minute trip down the Seaway tot he rock jetties, we encountered several other hulls, some faster and some slower than ours. It was just after 4:00 a.m. and we were approaching the halfway mark. From the end of the rock jetties to Grand Gosier Island in the Chandeleur Chain is a distance of about 30 miles. It would take us about another 45 minutes to reach our destination.

In the distance to our left we could see the blinking lights of one of the numerous oil well platforms which are scattered throughout Breton and Chandeleur Sound. On our right were the blinking red and white channel markers of the gulf outlet. Looking almost directly ahead we could see the faint orange glow of the gas flares. Grand Gosier Island was located just beyond and to the south of these flares. On nearing the flares we could see several speed hulls anchored in a semicircle around the flame with the anglers casting toward the glow for "specks" and mackerel. As we got closer we could see the water fairly boiling with the strikes of feeding speckled trout. Knowing that with the fast approaching dawn these fish would soon stop feeding and move on to the nearby oil rigs and barges—we kept on going. On beyond the first flare we soon approached another. Grand Gosier was now just a few minutes beyond.

I knew that on our return trip in we would fish many of these platforms and barges, but now our main concern was to reach the gulf side of Grand Gosier. Angling the boat a bit more toward the Seaway we began to edge along the west side of the island. The weatherman's prediction had been correct thus far. There was just a slight breeze from the southeast. Dawn was breaking and the first pink glow of morning was now becoming evident.

Having passed the western end of the island we now headed parallel to the gulf side of Grand Gosier. It was necessary now to decide whether to look for feeding birds, which would indicate feeding fish, or to head toward the beach and begin casting expectantly into the surf. Seeing no birds it was decided to pursue the latter course. Cutting the throttle I began heading toward shore while Darren began taking depth measurements with our push pole. As soon as the depth reached 3 feet, I cut the engine off and raised the motor so as to be able to paddle a bit closer. Soon I was within about 50 feet of shore and decided I would anchor here and wade the remaining distance. Removing our clothes we then put our swim trunks on, gathered our rods and tackle, climbed over the side and waded to shore.

Hitting the beach like commandos we immediately began to assemble our 7$^1/_2$ foot spinning rods and decided to use 10 lb. "mono" lines. Being almost a purist when it comes to lures I chose a large sidewinder, as did Darren. Now seemingly ready, we ambled down the beach a few hundred yards, past our anchored boat, and waded into the gentle surf. It was necessary to wade a few hundred feet out to get to waist deep water. Now we began to fish in earnest. Flipping the sidewinders as far out as possible we allowed them to sink to the bottom. By alternately raising and lowering the rod and reeling in the slack, the lures were slowly bounced along the bottom. It wasn't very long before I heard the familiar whine of the spool at the same time Darren shouted "I've got one." The characteristic run of the "speck" was easily discernible by the way the line appeared to come straight to the top of the water. This trout, which was estimated to weight about 3 lbs., flashed and splashed along the surface of the water. Emerald spray glistened in the newborn sun just coming up over the horizon. With our light lines a fish of this size could not be "horsed," but needed to be played gently.

When I saw Darren's fish I reeled my lure in immediately and placed a cast beyond his fish. Reeling rather fast to keep the lure near the surface, I soon had a strike, although not as large a fish, nevertheless equally as agressive. We were both now attempting to bring our fish in without the use of a landing net. This is not recommended as many fish are lost while one tries to grab them with the bare hand. We decided to backtrack to the beach and gently slide them onto the shore. Our luck held and we began to unhook our first two fish. It was at this time I realized we didn't bring our fish stringers. I suggested to Darren that because he caught the first trout he should go for the stringers.

As he ambled back along the beach I again walked out and began casting. Within a few minutes I had another "speck." Deciding that going back and forth to the beach to land each fish would be too time consuming I decided to land my fish in the water. Holding the rod high and maneuvering the fish back and forth, I finally succeeded in grasping it behind the head. My fishing partner was just now stringing the first two fish so I elected to stuff this one inside my swim trunks until he arrived with our stringers. Continuing to cast I was soon fighting another "speck" on the end of my line, along with the one inside my swim trunks. Having two fish to contend with now I told Darren to hurry so as to unburden myself from this self-induced dilemma. After a fashion the one on the end of the line was brought under control and it, along with his intimate companion, was strung on the stringer.

For the next 45 minutes Darren and I were alternately fighting or stringing fish, and as is all types of fishing we spent a great deal of time cussing the ones which escaped. Action came to an abrupt halt soon after and we decided to take our 30 or more trout and head to the boat and seek greener pastures.

After leaving the beach we headed east again and fished some of the channels and cuts between the islands, hoping to hook some lunker trout. Such was not to be our luck in this respect today. Seeing several planes pass overhead a few times, I deducted that they were looking for fish also, and seemingly unsuccessful judging by the number of passes. Figuring that the surf fishing was over for now I headed back into the Sound to fish the barges and rigs. The time for tide change was about an hour away and I wanted to be there for the change. Coasting in toward the first barge I noticed that we would have company.

Putting our rods, tackle boxes and landing net onto the deck we moved to a vacant position and began casting. Using slow and fast retriever, fishing deep and then near the top, using large then small sidewinders, it was soon apparent that these fish didn't like our brand. Observing the other anglers made us aware that the yellow plastic worm was called for. This proved to be correct as we were soon hooking our share of "specks."

At times it is very awkward to net a fish from a barge which protrudes 12 feet above water and using an 8 foot scoop net. It then becomes necessary to either lift the fish bodily from the water or walk along the barge to the sloping end and then net the fish. It proved advantageous to lift the fish 3 lbs. or less, and walk the barges and scoop those which were slightly larger. None of our fish this day exceeded 4$^1/_2$ lbs.

There are occasions when practically all fish caught around these barges and structures will range from 4-6 pounds. This was not the

Continued on page 30

Continued from page 26

The fundamental thing about 2-4-D and other similar preparations is that hyacinth fighters now possess a practical means of destroying water hyacinths without damaging fish, waterfowl, domestic animals or creating a health hazard for humans. Also, the cost of treatment per acre by chemicals is greatly less than clumsy mechanical removal. This is an important factor in states where conservation budgets are low.

An important factor in the hyacinth struggle is the growing force of sportsmen who are aware of their stake in the outcome of this continuing fight. They represent the greatest number of persons who realize that victory is temporary.

Most important thing to remember is that a single flowering hyacinth can infest a lake and eventually destroy it. The waterfowler and angler should be alert to the danger that threatens his sport. Many lakes in the South have been cleared, but the cure is temporary and beneath the surface are viable seeds. They are minute time bombs with delayed action fuses. Next year they may germinate and become hyacinths. Perhaps it will be two years or more; but they are there and eventually they will become floating hyacinths capable of exploding numerically until they blanket a lake or stream.

The present aquatic vegetation control program for Louisiana is a combined effort of the State of Louisiana and the U. S. Corps of Engineers. The state furnishes 30 percent of the funds while the Corps of Engineers provides 70 percent.

For the fiscal year 1968 the total operational budget for the combined federal-state program was $549,000 of which the state contributed $152,000 and the federal government $397,000. The state's operational share is approximately 20 percent, $106,000, over and above their guaranteed participation. The remainer is applied directly to operations by the Corps of Engineers in expanding its normal hyacinth control program in maintaining the navigable waterways in the southern portion of the state.

Briefly tracing the fight against water hyacinths, the first weapon used by the Corps of Engineers was the commonplace pitchfork; but the flower-crested hyacinths grew faster than they could be forked on land to rot and die.

In 1900, the Ramos, a sternwheeler with a four-foot conveyor belt that picked up hyacinths and ran them through crushers, was put in use. Again, the plants grew faster than Ramos could chew them up. Dynamite quickly proved useless. It bothered the countryside more than the hyacinths.

When the flame thrower was used, the results were astonishing. A full cone of fire, hot enough to melt a block of steel was squirted on a hyacinth raft. When the fuel was exhausted, a frog emerged from the blackened mat and began sunning itself. The scientist using the flame thrower was even more astounded later during the next growing season. The burnt plants were not only the first to sprout but also averaged nine inches taller than surrounding plants not blasted by the flame thrower.

For a number of years, the Corps of Engineers relied on an arsenic compound. The herbicide killed hyacinths readily; but it also killed cattle, crops and people.

Its use was abandoned after one man was killed and 13 others became seriously ill when loose arsenic powder accidently got into the men's food.

In 1937 the Kenny—a souped-up version of the Ramos—was introduced. It was a modernized, twin-screw, 80-foot hyacinth destroyer designed by Bill Wunderlich, head of the Marine Growth Control Section of the New Orleans District Corps of Engineers. The Kenny's conveyor belt carried the hyacinths through a pair of rollers set to crush them at 40,000 pounds pressure, then spewed them off to the side.

Ironically, some of the mangled plants quickly blossomed out into two or three new stalks where previously there had been but one. The Kenny did serve one good purpose. It chewed the dense mats into bits and left the water open temporarily to shipping. It was retired in 1951 when Wunderlich assembled a contraption which might be described as a waterborne lawn mower. Its rotating saw blades, attached to the prow of a boat, cut a 40-foot swarth through a hyacinth mat, chewing it into small chunks and leaving a temporary channel.

The next step was utilization of 2-4-D. It not only kills the plants but sinks the mats so that they no longer obstruct navigation. This spray marked the turning point in the battle against hyacinths. It was followed by experiments with a new but more costly herbicide known as 2-4-5 T.

While the Corps of Engineers wrestles with the problem of keeping the waterways open to navigation, the Louisiana Wild Life and Fisheries Commission is faced with a more serious problem. When water hyacinths blanket a body of water, they deprive all of the aquatic vegetation of sunlight. (Photosynthesis is the process by which plants use sunlight to convert nonliving chemicals into living edible tissue.) Hyacinths eliminate the photosynthesis process.

All plants breathe and in doing so, they extract carbon dioxide from the air or water and give off the oxygen on which all animate aquatic life depends.

In efforts to utilize the millions of tons of water hyacinths produced each year in Louisiana, no commercial possibilities have been overlooked. Some persons have advocated raising cattle on the abundant supply of glossy green foliage. Cattle do eat hyacinths but the plentiful green leaves are made up of 95 percent water and lacking in basic nutritives.

There's a Cajun story floating about and it goes something like this: "My old cow she stands out there and eat those hy'cinths three hundred sixty-five days a year and drop dead the next. She starve herself eating."

Another prime example of the inability to utilize the unwanted botanical alien came when Wunderlich delivered four tons of the plants to two men who wanted to

Continued on page 30

Continued from page 29

determine if they could make wallboard from the pulp.

With tongue in cheek, he reported: "They ground it up, pressed it, and came out with a mighty handsome, shiny board. I thought they might have had something. But a couple of months later they told me they had given up the idea. We'd had a spell of bad weather and the damned wallboard had sprouted on them."

There's no silver lining to this lavender and green blanket of death. It is going to be a constant fight against the dreaded plants that flower overnight, seed in a single day, and defy man to put an end to their vicious cycle of life and death. ☐

Continued from page 28

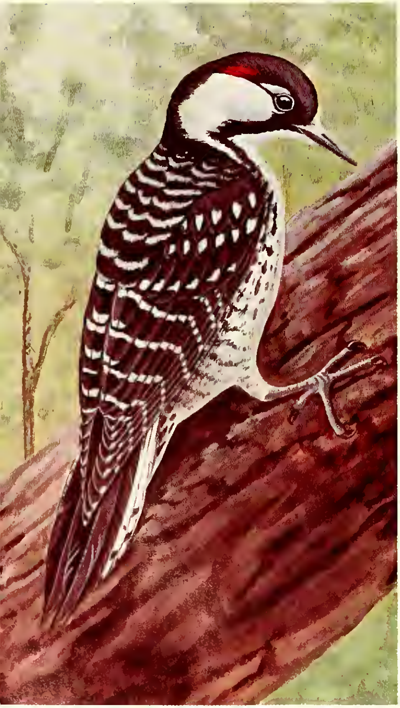
case this particular day. We fished on past the change of tide and found that the strikes were getting further and further apart. Noticing also that a few cumulus clouds were beginning to build I suggested we start heading back and perhaps fish a couple of platforms which I knew to be generally productive. So we headed back in the direction of the seaway, stopping sporadically to cast around one of the numerous rigs. We did manage to add another 10-15 trout to our now almost full two ice chests.

For the uninitiated fishing the Chandeleur Island and Breton Sound area can be very rewarding. An angler can fly to the Islands by plane and spot his fish, and then land and begin fishing, or he can go in his own boat and do his own exploring. Charter boats are available from Ycloskey in St. Bernard Parish and from Empire in Plaquemines Parish. By launching from Shell Beach or Hopedale it is only necessary to follow the New Orleans Gulf Outlet out into the Sound. From this point one can fish the many platforms and barges or head directly to one of the many islands in the Chandeleur chain.

Many species of fish are caught near or adjacent to these islands. The species most prevalent is the speckled trout. Excellent catches of redfish are made in the channels between islands and along the beaches. Spanish mackerel, blue fish, flounders, and croakers also are caught at the inside rigs in spring and summer. Occasional tripletails and cobia are caught in addition to the aforementioned,

A word of caution should be stressed concerning this type of fishing. A person should have a map, compass, anchor, plenty of anchor rope, along with extra cans of gas. Knowing the weather conditions for a given day is a prime prerequisite.

For the venturesome, a trip to the last frontier of Louisiana, yet untouched by highways, motels and other facets of civilization, is a must. ☐



BIRD of the MONTH

by Charles R. Shaw

Illustrated by John P. O'Neill

Red-Cockaded Woodpecker
Dendrocopos borealis

The "cockades" for which the bird is named are actually quite inconspicuous, consisting only of two very small patches of red feathers located well back on the sides of the head of the male, and may not be noticed at all in the field unless the bird is very close. However the black and white bars across the back which give it a zebra-backed or ladder-backed appearance are quite noticable and when combined with the black cap on the top of the head and the white patches on the side of the head can be fairly reliable for identification. The only other ladder-backed woodpecker in our area is the somewhat larger Red-bellied Woodpecker which has considerable red around the head and no black cap. Both of these birds are erroneously referred to as "sapsuckers" by those who do not differentiate too closely between the various species.

Although not a large or spectacular bird the Red-cockaded Woodpecker is rather unique in a couple of respects. In the first place it has been placed on the Endangered Species list by the U. S. Fish & Wildlife Service and in the second place, in contrast to the usual woodpecker habits it digs out its nest hole in a live tree rather than the normally used dead trunk or limbs. Actually these two facts are related since the scarcity of suitable nesting sites may be a major factor in its declining population. In picking a nesting site these birds are very particular and hard to please. They specialize in live pine trees but only those which are mature and infected with "red-heart" or similar diseased condition which produces an internal cavity or space of some type. Since the trees chosen are already infected internally the Red-cockaded Woodpecker

Dear Reader:

I join with other members of the Louisiana Wild Life and Fisheries Commission in calling your attention to this issue of the Louisiana Conservationist, appearing in a new format and in full color. By utilizing the medium of offset printing, we are now able to bring you the programs, accomplishments and activities of the Commission in eye-catching color.

We feel that this marks a forward step in presenting the Louisiana scene and its outdoor recreational attractions as they really are—vibrant, colorful and progressive.

In this issue, and in future issues of the Louisiana Conservationist, you will be able to appreciate more fully the bountiful resources of Louisiana and the great dependence of perpetuation of those wildlife and fisheries resources on sound conservation practices and programs.

This transition to living color marks not only a progressive step, in keeping with other states, but also an economical move toward full coverage of Louisiana for our readers. We hope you will share with us the enthusiasm with which we present the first issue of the new Louisiana Conservationist.

Jerry Jones
Chairman

should not be accused of destroying good timber.

The nesting cavity is usually located from 20 to 100 feet above the ground and the bird tunnels upward slightly before constructing the usual gourd-shaped nesting chamber in the rotten heart of the tree. The usual clutch consists of about 4 white eggs which may become somewhat smeared with pitch before hatching.

These birds deliberately puncture the bark around the entrance to the nest to make the sap flow freely and the area is covered with pitch. This can be used to easily spot the Red-cockaded Woodpecker nests in the open pine wods. Nests are used year after year as long as the birds can continue to keep the sap flowing and they will often shift to another location on the same tree but the site is abandoned when the tree finally dies.

The territorial instinct does not seem highly developed and often several pairs may be found nesting in the same area.

Various other forms of wildlife such as the Red-headed and Red-bellied Woodpeckers, Crested Flycatchers, Flying Squirrels, etc. may use abandoned nests to good advantage.

The young birds in their initial plumage are similarly colored and marked as the adults except that the young males have a dark crimson crown patch and the under parts are more buffy than white. The dark markings may range in color from dark sepia to black rather than the true black of the adults.

As would be expected the food consists primarily of the larvae of various wood-boring insects supplemented with beetles, grubs, ants, caterpillars, grasshoppers, etc. In the old days they were reported to have visited corn fields at roasting ear time to pull the worms from the ears of corn. They are also reported to feed occasionally on pine mast, small wild grapes and other small wild fruit and berries.

These birds normally feed high in the trees and seldom if ever close to the ground. They move about considerably when feeding and work rapidly up a tree, usually spiraling around it. They are also quite good at keeping a tree trunk between themselves and anyone who is trying to observe them. As mentioned previously the Red - cockaded Woodpecker is tolerant of own kind when setting up nesting sites and this is also true of feeding behavior with several birds feeding in the same general vicinity, perhaps a combination of one or two family groups.

The Fort Polk Wildlife Management Area contains a number of these birds as undoubtedly is true of many places where older stands of pine flourish such as the Kisatchie National Forest. Since this is a beneficial and possibly endangered species the easily recognized nesting site trees of the Red-cockaded Woodpecker should be marked and left for use by these birds.

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